

## Nutrition and Dietetics

# Healthy eating for diabetes in pregnancy

### What is gestational diabetes?

Gestational diabetes is diabetes which appears for the first-time during pregnancy. You may have tested positive for glucose in your urine. Most people then have a glucose tolerance test (GTT) to confirm the diagnosis of gestational diabetes.

During pregnancy, hormones are produced which stop the hormone insulin from working as well as it usually would. This causes blood glucose (also known as 'blood sugar') to rise. In some people this effect is bigger than others, causing **Gestational Diabetes**.

It is important to control blood glucose levels to target levels to avoid weight and health problems for your baby at birth, and beyond.

### What if I have Type 2 Diabetes?

If you already had Type 2 Diabetes before pregnancy, this information will help you to make good choices and give some guidance to help you regulate your blood glucose levels.



## Summary of recommended diet if you have diabetes in pregnancy

- Avoid all drinks containing sugar – sugary fizzy drinks, fruit juices, fruit smoothies, milkshakes, and sweetened coffees. Diet versions and unsweetened hot drinks are fine.
- Swap sugary and sweet snacks such as biscuits, cakes, sweets and chocolate for lower carbohydrate snacks such as nuts, pickles, vegetable sticks or very dark chocolate (80% cocoa content or more).
- Try to reduce portion size of starchy food at a meal to keep your blood glucose levels under the target level.
- It will help to have only 1 type of carbohydrate at a meal – have **either** potatoes, or bread, or pasta, or rice. Combinations, such as rice and chapatti, pie and potatoes, pasta and garlic bread, yam and rice and sweet potato, will usually cause blood glucose levels to go above target levels. Include more vegetables or salad to fill up your plate.
- Low glycaemic index (GI) starchy foods are more slowly absorbed and so a better choice (more information later).
- Include lots of vegetables and salads at meals and snacks – they have lots of fibre, vitamins and minerals and are low in carbohydrate.
- Fruit contains natural sugar – limit to 1 portion at a time and preferably between meals.
- Include protein foods in your meals (more details later).

Include milk and dairy foods such as yoghurt and cheese as a good source of calcium and iodine. Spread your milk over the day as it is also a source of lactose, or milk sugar (more details later).

## Which foods cause blood glucose to increase?

Foods and drinks containing **carbohydrate** will cause your blood glucose level to rise. Both the **amount and type** of carbohydrate can affect your blood glucose levels.

## Types of carbohydrate

### Sugary foods

Consider swapping sugary foods for lower sugar options:

Sugary foods	Lower sugar alternatives
Sugar, brown or demerara sugars, icing sugar, fructose, Sugar Twin, Sugar Lite, molasses, jaggery	Artificial sweeteners such as sucralose, aspartame, stevia (avoid the blend or baking style sweeteners as they contain sugar too)
Jam, marmalade, honey, syrup, treacle, lemon curd, chocolate spreads, maple syrup	Low-sugar jam or marmalade, no-added- sugar fruit spread
Squash and fizzy drinks containing sugar, e.g. Lucozade, Ribena, Sunny Delight Fruit juices and smoothies. Flavoured water <b>may</b> contain added sugar (check the label) Milkshakes/Nesquick™.	Sugar-free squash, or sugar-free fizzy drinks ('light', 'diet' or 'zero'), water, soda water, mineral water, slimline mixers, Ribena Light™ and C-Vit™ No-added-sugar Crusha™ added to milk
Drinking chocolate, malted milk drinks Watch out for sachets of coffee, many of which contain sugar or syrup. Tea, coffee with sugar	Cocoa, low calorie hot chocolate drinks such as Options™ or Highlights™ drinks Tea, coffee granules with sweetener
Sweets, chocolates, toffees, mints, sugar-free sweets containing isomalt, Indian sweets such as burfi, jalebi, gulabjaman, halva, penda	Fresh fruit, sugar-free mints or sugar-free chewing gum

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Tinned fruit in syrup, jelly, instant whips, yoghurts and puddings sweetened with sugar	Fresh fruit, tinned fruit in natural juice, puddings sweetened with artificial sweeteners, sugar-free jelly, sugar-free instant whip  Natural or diet /light yoghurt e.g. Mullerlight™, Weight watchers™, Shape™, Irish Diet™, one scoop of ice cream
Sweetened condensed milk	Semi-skimmed evaporated milk

### Artificial sweetener

Try not to have foods or drinks with artificial sweeteners every day. Research shows that drinking artificially sweetened drinks daily can increase the risk of asthma in their child/ren up to the age of 7 years.

### Dairy foods

**Milk and yoghurts** contain a natural carbohydrate called lactose. This will affect blood glucose if taken in large amounts.

By **spreading dairy foods throughout the day** in moderate amounts, there will be less effect on blood glucose levels. This is because the carbohydrate load is reduced.

- A lower carbohydrate alternative could be unsweetened plant-based milks/yoghurts fortified with calcium. Check the labels as the carbohydrate content does vary between brands.
- Cheese does not contain carbohydrates but is high in saturated fat. A portion of cheese is a match-box size amount.
- Cows' milk and yoghurt are good sources of iodine. Iodine is important for baby's brain development in the womb.

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### Fruits

All fruit including fresh, frozen, dried and canned, contains a carbohydrate called fructose. We recommend that you have some fruit daily, but only **one portion at a time** (1 portion is about 1 handful). Dried fruit contains concentrated sugar so smaller portions are advised.

Spread individual portions throughout the day, preferably in-between meals. Please refer to the **snack list for a suggested portion guide**.

### Starchy foods

Starchy foods are broken down into glucose. The **amount eaten** in one sitting is important; the **more you eat, the greater the effect on blood glucose**.

The glycaemic index of carbohydrates will have an effect on your blood glucose readings. Eating lower glycaemic index foods may reduce the **speed** at which foods make the blood glucose level rise. Foods with a lower glycaemic index release their glucose slowly into the blood, helping to control blood glucose levels after a meal.

Examples of good swaps can be seen in the table below:

<b>Higher GI foods - choose less often</b>	<b>Slower release (lower GI) choices – choose more often</b>
Cornflakes, Rice Krispies™, sugar-coated cereals.	Whole oats, oatmeal, oat-based cereals, porridge oats (not instant), All bran™
White, brown or wholemeal bread, bagels, crumpets. Sugary cakes and biscuits (with sugary toppings and fillings)	Multi grain bread (granary type), pitta bread, rye bread, sourdough bread, chapattis, oatcakes Nuts, sugar-free nut butter and seeds

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Pasta (not fresh, maize or corn pasta) Rice varieties- quick cook rice, jasmine or 'sticky' types Mashed or jacket potatoes	Pasta (wheat dry pasta, cooked), noodles, basmati or long-grain rice, pearl barley, Quinoa, buckwheat or bulgur wheat, sweet potato, new potatoes, roast potatoes (try to keep the skins on)
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**If your blood glucose readings are consistently high after meals, consider reducing your portion sizes of starchy foods. High blood glucose is 7.8mmol/l, or more, one hour after meals.** You can also try combining them with protein or a low GI food as this will reduce the overall GI.

### How much starchy carbohydrate?

You may find it helpful to estimate starchy carbohydrate portions by comparing them, when cooked, to the size of your fist or about  $\frac{1}{4}$  of your plate. If you are having bread as your starchy carbohydrate portion, this is equal to around 2 slices of medium cut bread, a roll the size of your fist, or 1 chapatti.

### Foods that have little effect on blood glucose levels

#### Protein

Foods such as meats, fish, eggs and cheese do not directly affect blood glucose. Vegetarian protein sources include lentils, pulses, beans, tofu, soya mince, Quorn and paneer.

Protein can help to fill you up for longer and help to slow down the release of glucose into the bloodstream if combined with carbohydrate-containing foods at mealtimes.

We suggest choosing lower fat options where possible to help insulin work better. For example, 5% fat mince, removing visible fat from meat, and

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low-fat dairy options. Replacing animal sources of protein with soya can help your blood glucose levels.

### **Fats**

High fat foods such as oils, margarines, cheese, cream, nuts, sugar-free nut butter and avocado do not directly affect blood glucose levels. However, they are high in calories, so could increase your weight if taken in large quantities.

High amounts of saturated fat (found in animal products) can make it more difficult for sugar to leave your blood. Choose lower saturated fat options of cheese, cream, and meat to help.

High fat diets are not recommended for managing blood sugar levels. Your stomach will empty more slowly when you eat more fat, so glucose will rise more slowly, going high 2-3 hours after eating rather than 1 hour after eating.

### **Vegetables and salads**

Vegetables and salads contain only small amounts of carbohydrate. These generally do not affect blood glucose levels.

Vegetables also contain fibre and vitamins and are low in calories. These are a good food to have lots of, especially if you are trying to reduce other higher calorie foods.

A variety of different coloured vegetables provides a wide range of different nutrients. Eat slightly smaller portions of the higher carbohydrate vegetables such as parsnips, butternut squash and sweet potato.

### **Beans, lentils and other pulses**

Beans, lentils and other pulses contain carbohydrate, but have little effect on blood glucose levels. They are high in protein and fibre, making absorption very slow.

### Snacking

When you have diabetes, you do not 'need' to eat snacks unless you have been advised to do so by your dietitian. However, if you are hungry in-between meals, aim for healthy, low carbohydrate snacks to limit any effect on your blood glucose levels.

If you eat a snack with a food label, check that **Total Carbohydrate** for the portion is **less than 20g**. The lower the carbohydrate content, the smaller the effect on your blood glucose level. Try to have just **one** carbohydrate-containing snack between meals.

#### Snacks containing 15-20g carbohydrates

- Small pot of light yoghurt, add unsalted nuts or a light sprinkling of dried fruit for an extra filling snack
- Mini pizza – half a wholemeal roll, spread with pesto and load with tomato, mushrooms and a sprinkle of cheese then toast under grill
- 1 mini pitta bread thinly spread with peanut butter (only avoid nuts if family history of nut allergy)
- Tinned sardines in tomato sauce on a slice of wholemeal toast or 2-3 crispbreads
- 2 Oatcakes covered with low fat cream cheese and topped with a few halved grapes, marmite or cucumber/celery
- 10 grapes or 2 plums or 2 satsumas or half a mango
- A tablespoon of dried fruits or 3 dried apricots (these are very concentrated in sugar)
- 1 fruit, such as: a small banana, apple, orange, peach or nectarine

#### Snacks containing less than 10g carbohydrates

- Small pot of light/diet yoghurt or 120g plain, natural yogurt
- Sugar-free jelly
- A mug of 'light' hot chocolate / cup-a-soup / 1/3 tin tomato soup
- Any meat, fish, eggs, or vegetarian Quorn substitutes

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- Handful of unsalted nuts (only avoid peanuts if family history of peanut allergy) or handful of roasted soya beans/ seeds
- Low fat cheese stick and 1 piece of fruit
- Sliced avocado and cherry tomatoes
- Small bowl of unsweetened popcorn
- Raw veggie sticks such as carrot sticks, celery, cucumber, with a dip such as hummus, salsa, guacamole or garlic/herb cheese spread
- Handful of strawberries, blueberries, raspberries, blackberries, cherries
- Rolled ham & pineapple on sticks (2 pineapple rings)
- 2 squares of 80-90% cocoa chocolate

## What happens after your baby is born?

Gestational diabetes usually disappears after your baby is born. But is likely to come back in any further pregnancies.

You may also have an increased chance of developing Type 2 Diabetes later in life.

## Vitamin supplements and pregnancy

Some supplements are advisable for **all** pregnant women. Speak to your GP, dietitian, or midwife about this:

- Folic Acid - to be taken up to 12 weeks in pregnancy for prevention of neural tube defects.
- Vitamin D is very important for the development of the foetus and for preventing rickets during childhood. During pregnancy, a vitamin D supplement of 10 micrograms daily is recommended. This dose can also be continued whilst breastfeeding to maintain adequate vitamin D levels.
- Iron - many pregnant women are prescribed iron supplements if their levels become low. These are best taken with a meal containing a source of vitamin C.
  - Be careful to not drink tea and coffee with meals if you need to increase your iron levels as it prevents absorption.

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- Vitamin C is found in foods such as an orange, strawberries, kiwi fruit, peppers, broccoli, and potatoes. These are better choices than drinking orange juice when you have diabetes.
- Iodine – contained in pregnancy multivitamins, but you might need a supplement if you do not have many dairy or fish sources in your diet. Iodine is needed to support baby's brain development in the womb.

## Listeriosis

Please note: **Avoid ready-to-eat smoked or cured fish products such as smoked salmon or gravlax due to an increased risk from listeriosis.** Listeriosis is an infection caused by bacteria called listeria. People with diabetes and/or are pregnant are at higher risk of serious illness from listeriosis.

More information on how to reduce the risk of Listeriosis can be found at: Listeriosis - NHS ([www.nhs.uk](http://www.nhs.uk)) and Listeria | Food Standards Agency.

## Useful contacts

### Diabetes UK

0207 424 1000 (reception)

0207 424 1030 (care line)

[www.diabetes.org.uk](http://www.diabetes.org.uk)

[infoscience@diabetes.org.uk](mailto:infoscience@diabetes.org.uk)

### Diabetes Dietitians Coventry

024 7696 6161

### Diabetes Dietitian Rugby

01788 663 242

## Patient Information

The Trust has access to interpreting and translation services. If you need this information in another language or format, please contact 024 7696 6161 and we will do our best to meet your needs.

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